

ACTIVE PIXEL SENSOR WITH INTRA-PIXEL CHARGE TRANSFER

ABSTRACT OF THE DISCLOSURE

An imaging device formed as a monolithic complementary metal oxide semiconductor integrated circuit in an industry standard complementary metal oxide semiconductor process, the integrated circuit including a focal plane array of pixel cells, each one of the cells including a photogate overlying the substrate for accumulating photo-generated charge in an underlying portion of the substrate, a readout circuit including at least an output field effect transistor formed in the substrate, and a charge coupled device section formed on the substrate adjacent the photogate having a sensing node connected to the output transistor and at least one charge coupled device stage for transferring charge from the underlying portion of the substrate to the sensing node.